

## CLAIMS

Amended on August 20, 1999

1. A method for implementing call forwarding in a mobile system  
5 comprising at least one forwarding exchange (GMSC; VMSC) for carrying out  
call forwarding on the basis of subscriber data related to the call forwarding, at  
least one subscriber database (HLR; VLR) for storing the subscriber data  
related to the call forwarding, the method comprising the steps of  
receiving at the forwarding exchange (GMSC; VMSC) a call set-up  
10 message addressed to a subscriber in the mobile system,  
performing a subscriber data request to the subscriber database  
(HLR; VLR),  
transmitting a response message from the subscriber database  
(HLR; VLR) to the forwarding exchange (GMSC; VMSC), the message  
15 containing data indicating the call forwarding and a forwarding number,  
**characterized by**  
providing the forwarding exchange (GMSC; VMSC) with a basic  
service code, and  
implementing call routing to the forwarding number according to the  
20 basic service code.
2. A method for implementing call forwarding in a mobile system  
comprising at least a first exchange (GMSC) for carrying out call forwarding on  
the basis of subscriber data related to the call forwarding, at least one home  
location register (HLR) connected to the first exchange for storing the  
25 subscriber data related to the call forwarding, the method comprising the steps  
of  
receiving at the first exchange (GMSC) a call set-up message  
addressed to a subscriber in the mobile system,  
requesting routing information from the home location register  
30 (HLR),  
transmitting a response message from the home location register  
(HLR) to the first exchange (GMSC), the message containing data indicating  
the call forwarding and a forwarding number, **characterized by**  
providing the forwarding exchange (GMSC) with a basic service  
35 code indicating the basic service related to the call in connection with the call  
set-up message or a response message to said routing information request,

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implementing call routing to the forwarding number according to said basic service code.

3. A method according to claim 2, **characterized** in that the basic service code is forwarded from the home location register (HLR) to the first exchange (GMSC) via an extension added to the response message Send\_Routing\_Info\_RES to the routing information request.

4. A method for implementing call forwarding in a mobile system comprising at least one exchange (VMSC) for carrying out call forwarding on the basis of subscriber data related to the call forwarding, at least one visitor location register (VLR) for storing the subscriber data related to the call forwarding, the method comprising the steps of

receiving at the exchange (VMSC) a call set-up message addressed to a subscriber in the mobile system,

providing a subscriber data request to the visitor location register (VLR) connected to the exchange,

transmitting a response message from the visitor location register (VLR) to the exchange (VMSC), the message containing data indicating the call forwarding and a forwarding number, **characterized by**

providing the forwarding exchange (VMSC) with a basic service code in connection with the call set-up message or said response message, and

implementing call routing to the forwarding number according to the basic service code.

5. A home location register (HLR) connected to a first exchange (GMSC) in a mobile system, **characterized** in that the home location register (HLR) is arranged to transmit a basic service code to the first exchange (GMSC) in connection with a response message to a routing information request, the data indicating the basic service related to the call.

6. A home location register (HLR) according to claim 5, **characterized** in that the home location register (HLR) is arranged to forward the basic service code to the first exchange (GMSC) by means of an extension added to the response message Send\_Routing\_Info\_RES to the routing information request.

7. A first exchange (GMSC) in a mobile system, comprising means for transferring a call to a forwarding number, **characterized** in that the exchange is arranged to derive a basic service code from the call set-up

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message or from a response message transmitted by the home location register (HLR) to the first exchange (GMSC) in response to a subscriber data request, and

the exchange (GMSC) is arranged to route the call to the forwarding  
5 number according to the basic service code.

8. An exchange according to claim 7, **characterized** in that the exchange is arranged to receive the basic service code in an extension added to the response message Send\_Routing\_Info\_RES to the routing information request.

10 9. An exchange (GMSC) according to claim 7, **characterized** in that said forwarding number is the number of a Voice Mail Service center having several lines, and that said exchange is arranged to transfer the call to the Voice Mail Service center via a line selected for the transfer according to the basic service code.

15 10. An exchange (GMSC) according to claim 7, **characterized** in that the exchange (GMSC) is arranged to subject the forwarding number to a conversion selected according to the basic service code.

20 11. An exchange (VMSC) in a mobile system, comprising means for transferring a call to a forwarding number, **characterized** in that the exchange is arranged to derive a basic service code from basic service data that indicates the basic service of the call and that is transmitted in connection with the call set-up message or a response message transmitted from the visitor location register (VLR) to the exchange (VMSC) in response to a subscriber data request, and

25 the exchange (VMSC) is arranged to perform routing to the forwarding number according to said basic service code.

30 12. An exchange according to claim 11, **characterized** in that the exchange is arranged to derive the basic service code at least on the basis of the bearer capability information element contained in the basic service data.

35 13. An exchange (VMSC) according to claim 11, **characterized** in that said forwarding number is the number of a Voice Mail Service center having several lines, and that said exchange is arranged to transfer the call to the Voice Mail Service center via a line selected for the transfer according to the basic service code.

